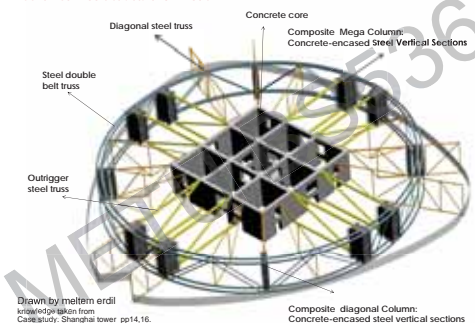
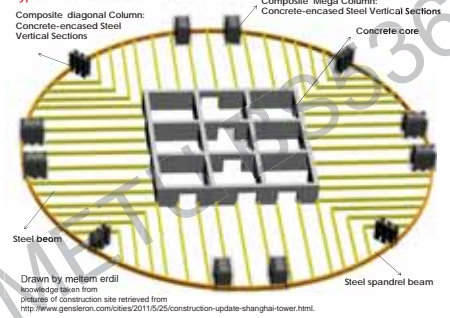


• Knowledge about plan shape taken from Case study: Shanghai tower pp.17, Shanghai tower pp.3, about column sizes from Shear innovation pp.4

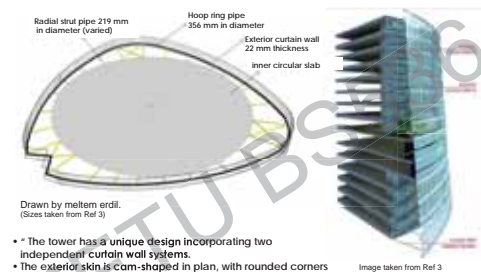
Mechanical Floors Structural 3D model



Typical Floor Structural 3D model



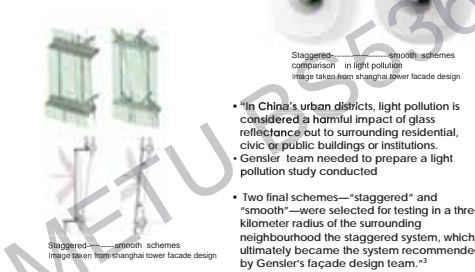
• Curtain Wall



- The tower has a unique design incorporating two independent curtain wall systems.
- The exterior skin is cam-shaped in plan, with rounded corners resembling a guitar pick.
- The inner skin is circular.
- The outer curtain wall is created by a series of hoop rings that are cam-shaped and rotating around the circumference of the inner cylindrical tower.²

2: Xia J., D.Poon,D.C.Mass. (2010). Case study: Shanghai Tower. CTBUH Journal, Issue2, pp 12. Retrieved from <http://www.ctbuh.org/LinkClick.aspx?fileticket=1p2D79UqM%3d&tabid=1090&language=en-GB>. Retrieved on 14 Jan 2012.

• “The light pollution category was the single most impactful variable in the overall exterior wall concept design and glass selection.”³



3: Zeljic A.S.(2010). Shanghai Tower Facade Design. Paper was delivered at the International Conference on Building Envelope Systems and Technologies held in Vancouver, Canada. Retrieved from http://www.gensler.com/uploads/documents/Shanghai_Tower_Facade_Design_Process_07_28_2011.pdf. Retrieved on 15 Nov 2011.

Sustainable design:

“Sustainable design is at the core of Shanghai Tower’s development. From the outset, the design team targeted a LEED Gold rating and a China 3 Star rating.

The project features water treatment plants that recycle grey water and storm water for irrigation and toilet flushing. The system features water treatment plants within the tower, podium, and basement level to reduce pumping energy.”²



“The 2,200-kW natural gas-fired cogeneration system (site-generated power) provides electricity and heat energy to the Low Zone areas. Site-generated power has the advantage of reducing source energy consumption and the carbon footprint of the facility by utilizing clean-burning natural gas in lieu of high-sulfurcoal.”²

“Wind tribunes at the top of the building will power the exterior lighting for the building and some of the park areas. The tribunes will produce an estimated 34,000kw/year in renewable energy.”⁴

2: Xia J., D.Poon,D.C.Mass. (2010). Case study: Shanghai Tower. CTBUH Journal, Issue2, pp 12. Retrieved from <http://www.ctbuh.org/LinkClick.aspx?fileticket=1p2D79UqM%3d&tabid=1090&language=en-GB>. Retrieved on 14 Jan 2012.
4 Gensler (n.d). Design update: Shanghai Tower. Retrieved from http://www.gensler.com/uploads/documents/Shanghai_Tower_12_22_2010.pdf. Retrieved on 15 Nov 2011.

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- 3) Zeljic A.S. (2010). Shanghai Tower Facade Design. Paper was delivered at the International Conference on Building Envelope Systems and Technologies held in Vancouver, Canada. Retrieved from http://www.gensler.com/uploads/documents/Shanghai_Tower_Facade_Design_Process_07_28_2011.pdf . Retrieved on 15 November 2011.
- 4) Heritage building systems. Retrieved from http://www.heritagebuildings.com/help/gpolic_loads.htm . Retrieved on 16 Jan 2012.
- 5) Gensler (n.d). Shanghai Tower project summary. Retrieved from <http://www.neoccon.com/tasks/sites/Neoccon/assets/Files/W338.pdf> . Retrieved on 15 Nov 2011.
- 6) Mitsubishi Electric. (28 September 2011). Mitsubishi Electric to install World’s Fastest Elevators in Shanghai Tower. Retrieved from <http://www.mitsubishielectric.com/news/2011/nd/0928.pdf> . Retrieved on 17 Jan 2012.
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- 8) Gensler (n.d). Design update: Shanghai Tower. Retrieved from http://www.gensler.com/uploads/documents/Shanghai_Tower_12_22_2010.pdf . Ret'd on 15 Nov 2011.
- 9) Stanel, H. M., Igin, E., (2010). Yüksek katlılar: Tasayıcı Sistem ve Aerodinamik Form. Middle East Technical University Faculty of Architecture, Ankara/Turkey
- 10) Shanghai Tower. Retrieved from http://swacdn.s3.amazonaws.com/1/4670a6c0_newsotb_2009_shanghai_tower.pdf . Retrieved on 21 Jan 2012.